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VIII. *An Account of the Death and Dissection of John Bayles, of Northampton, reputed to have been 130 years old. By Dr James Keill.*

John Bayles, the old Button-maker of Northampton, is commonly reputed to have been 130 years of age when he dyed. There is no Register so old in the Parish where he was Christened; but the oldest people, of which some are 100, others 90, and others above 80 years, remember him to have been old when they were young. Their accounts indeed differ much from one another, but all agree that he was at least 120 years. He himself did always affirm that he was at *Tilbury* Camp, and told several particulars about it; and if we allow him to have been but 12 years old then, he must have been 130 when he dyed.

He used constantly to walk to the Neighbouring Markets with his Buttons within these 12 years, but of late he has been decrepid, and carryed abroad. His Dyet was any thing he could get. I never heard he was more fond of one sort of Food than another, unless it was that about half a year before he dyed he longed for some Venison Pasty, but had it not. He dyed the 4th of *April* 1706. He lived in 3 Centuries, and in 7 Reigns.

His Body was extremely emaciated, and his Flesh feeling hard, the shape of all the External Muscles was plainly to be seen through the Skin.

The *Abdomen* being laid open, the whole *Viscera* appeared in good order, but more pale than they are commonly.

The *Omentum* was very small.

The *Stomach* was very much distended with Wind, and the Bottom of it wore extremely thin in that part which is next the *Spleen*, being hardly thicker than thin Writing Paper. In the inner Membrane there were no *Plicæ*.

The *Liver* was pale, but upon cutting was found perfectly sound. The *Gall Bladder* was of a larger size.

The *Spleen* was not so big as one of his *Kidneys*.

His *Kidneys* were firm and sound, as were all the *Urinary Passages*. In the *Right Kidney* were a few small yellow grains of *Gravel*.

The *Intestines* were all sound; the *Mesentery* was covered with *Fat*.

The *Cartilages* of the *Sternum* were not harder than usually they are. The *Ribs* were brittle, for by leaning gently upon one of them it broke.

The *Lungs* were attacked even to the *Pleura*: They were spongy, whitish, with many small black spots of *Blood*. The *Cavity* of the *Thorax* was large and clear.

The *Heart* was large, thick and fat; and tho he was always a little Man, yet the *Diameter* of the *Aorta*, before the *Carotidales* go off, was above two inches, which is considerably bigger than ever I remember to have seen.

The *Aorta* in the *Abdomen*, and *Illiacks*, was for the greatest part *Cartilaginous*.

The *Bones* of the *Skull* were sound and good.

On the inside of the *Dura Mater*, by the *Falx*, was a small ossification.

The *Brain* was more firm and solid than usual, and in cutting, hardly moistened the sides of the *Knife*. The *Ventricles* were full of *Serum*. He had lost the use of his *Eyes* for some years; but his *Hearing* was good.

he dyed. His Genitals, both Testicles and *Penis*, were of a large size.

There is no doubt but that the weakness of his Stomach, and the hardness of the *Aorta*, were the Causes of his Death. The Coats of the Stomach were so thin, that they had not strength enough to keep out the Air, and consequently his Digestion must have been spoiled. He had not eat-Meat for some years, and of late he lived only on Small Beer, Bread and Butter, and Sugars. And it was impossible that his Blood could circulate duly, whilst the great Artery, having lost its Elasticity, by being become Cartilaginous, could give no motion to the Blood. It is very probable that this was the Cause of his irregular and intermitting Pulse, which I have felt some years before he dyed. It is observable, that the greatest part of his Blood (which was in greater quantity than I expected) was contained in the Arteries, whereas generally in all dead Bodies the Veins are full, and the Arteries almost empty; for the Arteries being distended by the Blood, which they receive upon the last Systole of the Heart, by their natural Elasticity contract again, and empty themselves into the Veins, from whence it returns no more; but in this Man, the Great Artery having lost the power of contracting itself, it retained the Blood it received by the last Systole of the Heart.

This account agrees with that given of old *Parre* by the famous *Harvey* in most particulars, except in the Causes of their Deaths. But in both nothing seems more remarkably the effects of old age than the smallness of their Spleens, which undoubtedly was owing to the contraction of their Fibres in such a lax and spongy Bowel.

The whiteness of the Bowels in both must be likewise either from the same contraction or closeness of the Coats of the Blood Vessels, or from a want of Blood. *Harvey* says nothing of the quantity of Blood he found in old *Parre*;

Parre ; but if we may guess from his Body being fleshy, from the goodness of his Stomach and Appetite, and from the Disease he dyed of, there could be no want of Blood in him. In this Man there seemed to be more Blood than in several others I have seen, whose Bowels appeared more Red. And it can hardly be conceived, that the *Aorta* could be so large, without a large quantity of Blood, unless there had been some Stricture upon some other parts of it, which I did not perceive: And therefore it seems not improbable, that this whiteness of the Bowels was owing to the closeness of the Blood Vessels in both. It is no small confirmation of this opinion, that the Flesh and Skin felt hard, and the Brain firm and solid. I might add that it is highly probable, that the same disposition might give a closeness or hardness to the Vessels every where else. It is true, this was a Distemper, but then it is as true that it is a Disease of Old Age, and may justly be reckoned one of the effects of it. And for a farther proof of what I have said, I cannot but take notice, that in preparing a piece of the small Gut for an Injection, the *Tunica Villosa* felt more like a fine File than the softest Velvet ; and that I could use more violence in injecting the Vessels than these parts will usually bear. Whoever considers how soft a Substance an Animal Body is at its first beginning, and how from time to time it acquires a firmness and solidity, will easily be induced to believe, that Old Age brings a more than ordinary hardness to all the Fibres and Vessels.

The necessary consequence of this hardness, and contraction of the Fibres and Vessels of old people, is a diminution of their Secretions, which *cæteris paribus* are always proportional to the Orifices of the Glands. Hence it is that we find the Skin of old people always dry, their perspiration being very little. They are likewise generally bound, old *Bayles* went to Stool but once in ten or twelve days for some years ; and old people are always com-

complaining of a want of moisture, not that the Radical Moisture is dried up, but because the natural secretions, by reason of the contraction of the Glands, are diminished. I have already observed, that we found in this old Man more Blood than could have been expected in such an emaciated Body, and without doubt it had been larger, if his Stomach and Appetite had been as good as old *Parre's*. The fullness of the Vessels, and the frequent Rheums and Catarrhs of old People, evince this necessary consequence of the closeness of the Coats of the Vessels: All which agrees with what the Writers of *Institutions* say, that old Men are *ratione partium solidarum frigidi & sicci, ratione excrementorum frigidi & humidi*.

From this retention of the excrementitious parts of the Blood, we may expect all the ill consequences of a vitiated *Plethora*, and languid motion of the Blood; for the Fibres of the Arteries being now become hard, instead of assisting, they obstruct the Heart in circulating the Blood; and the quantity of Animal Spirits separated in the Glands of the Brain, must likewise be less, not only because of the retention of the Excrementitious Humours, but also because of the closeness and firmness of the Brain itself, so that the contractions of the Heart and all the Muscles must be weak, and consequently the motion of the Blood languid.

*Gelidus tardante Senecta
Sanguis hebet.*

A due conformation of all the Vital parts is most certainly necessary to bring a Man to a full old Age; but above all the rest, there are two which to me seem to have had the greatest share in procuring a Longevity to old *Parre* and *Bayles*, by retarding the ill effects just now mentioned. The first is the Heart, which in both was strong and fibrous; for that being left alone to labour
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the circulation of a large quantity of sluggish Blood, a great strength is absolutely requisite to propel the Blood through unactive Vessels to the extremities of the Body, and back again. No doubt this is more easily done in Men of a low stature (as old *Bayles* was) which I am apt to think was a qualification of old Age. The second was the largeness of their Chests, and goodness of their Lungs, by which the Air had its full effort upon every Particle of the Blood, in rendring it florid and attenuating it, that it might easily move through the contracted Channels of an old Body.

Few have the happiness of such a Heart and Lungs, yet most men wish to live long; nor was it easy for Physicians to give Rules for preventing the ill consequences of extream old Age, whilst the effects of a long Circulation of the Blood were unknown; of which we can be certain only by Dissections of old persons, and these are not numerous enough to ground any thing certain upon: But if after Observations shall confirm the Remarks that have been now made, no doubt the Indication will be to preserve such a softness in all the Fibres, that they may easily yield to the pressure of the Blood, and by their Elasticity restore themselves to their former state, giving thereby a new *impetus* to the Blood.